

**Missouri Assessment Program  
Spring 2002**

**Science**

**Released Items  
Scoring Guide**

**Grade 10**

<b>Session:</b>	<b>1</b>
<b>Item No.:</b>	<b>5</b>
<b>Page No.:</b>	<b>5</b>
<b>Standard:</b>	<b>II.A1. (Std 8)</b>
<b>Goals:</b>	<b>1.6, 1.10, 2.1</b>

Key Element:

---

any one of the following:

- Information is sent faster.
  - More information can be sent at the same time.
  - Information sent is clearer/clearer reception. (Clear means clarity, not transparency.)
  - Fibers are lighter than electric wires.
  - Heat loss is reduced.
  - less expensive
  - any proven advantage of fiber optic technology for information transmission
- 

Note: No credit will be given for safety issues, flexibility, or simply saying “more reliable” without a qualifier.

Score Points:

1 point	one key element
0 points	other

<b>Session:</b>	<b>2</b>
<b>Item No.:</b>	<b>1</b>
<b>Page No.:</b>	<b>3</b>
<b>Standard:</b>	<b>I.B.1 (Std 7)</b>
<b>Goals:</b>	<b>1.1, 1.3, 3.1</b>

Key Elements:

---

any one of the following:

- How do Antibiotics B and C compare to Antibiotic A?
- Do strep bacteria become resistant to the other antibiotics?
- Do the other antibiotics become less effective against strep bacteria over time?
- Which of the antibiotics results in the lowest percent of cases not responding?
- Which of the antibiotics will treat successfully (cure) strep throat?

---

any one of the following:

- The other antibiotics lose their effectiveness over time.
- Strep bacteria become resistant to the other antibiotics over time.
- Strep bacteria develop resistance to the different antibiotics at different rates.
- Antibiotics B and C will have the same effect as Antibiotic A.
- Antibiotic A (or B or C) will be the most effective.

---

Score Points:

2 points	two key elements
1 point	one key element
0 points	other

<b>Session:</b>	<b>2</b>
<b>Item No.:</b>	<b>2</b>
<b>Page No.:</b>	<b>4</b>
<b>Standard:</b>	<b>I.B.3 (Std 7)</b>
<b>Goals:</b>	<b>1.3, 3.1</b>

Key Elements:

---

(Independent variable) type of antibiotic OR time

---

(Dependent variable) one of the following:

- cases treated successfully
  - cases treated unsuccessfully
  - bacterial resistance
  - relative effectiveness of antibiotics
- 

Score Points:

2 points	two key elements
1 point	one key element
0 points	other

<b>Session:</b>	<b>2</b>
<b>Item No.:</b>	<b>3</b>
<b>Page No.:</b>	<b>4</b>
<b>Standard:</b>	<b>I.A.3 (Std 7)</b>
<b>Goals:</b>	<b>1.3, 3.1</b>

Key Elements:

---

same dosage over the time period used for comparison

---

same doctor making the diagnoses over the time period used for comparison

---

same schedule for taking pills

---

same patient cross section (age, sex, etc.)

---

doctor's practice located in same geographical area

---

same ten-year period (same time frame)

---

taking medication according to instruction appropriate for that medicine (with food, without food, etc.)

---

Note: "Same climate" or "same environment" is not acceptable for credit.

Score Points:

3 points	three key elements
2 points	two key elements
1 point	one key element
0 points	other

<b>Session:</b>	<b>3</b>
<b>Item No.:</b>	<b>26</b>
<b>Page No.:</b>	<b>13</b>
<b>Standard:</b>	<b>VIII.B.2 (Std 4)</b>
<b>Goals:</b>	<b>1.6, 1.10</b>

Key Elements:

---

(a) any one of the following:

- decrease in numbers of other species
  - increase in numbers of other species
  - decrease in biodiversity
  - less space
  - depletion of resources (food, water, habitat)
  - overpopulation
  - increased pollutants or toxins
- 

(b) any one of the following:

- death of the entire population because of overcrowding and competition for resources
  - emigration to another area/migrate out
  - disease
  - exceed carrying capacity/overpopulation of new species
  - increase competition
  - death or reduction in size of existing population
-

---

(c) any two of the following:

- food
  - water
  - predators
  - disease
  - space
  - competition with other species
  - increased pollutants/toxins in the ecosystem
- 

Score Points:

4 points	four key elements
3 points	three key elements
2 points	two key elements
1 point	one key element
0 points	other